



## POWERING AGRICULTURE:

AN ENERGY GRAND CHALLENGE  
FOR DEVELOPMENT

# A POWERING AGRICULTURE GUIDE ON FINANCING TYPES FOR INNOVATORS



## OVERVIEW

The innovators supported by the Powering Agriculture Grand Challenge, and many others like them, are working on high-impact innovations that will require external capital to validate the technology, build and manufacture their product, reach customers, and ultimately scale before they can become self-sustaining. The type of external capital that a company can obtain depends on many factors including legal structure, mutual fit with the funder profile, the stage of innovation, the market opportunity, and return potential. The ability to navigate this complex landscape while maintaining a healthy capital structure is vital to the ultimate success of a venture. This guide presents an overview of the most common funding options, including grants, debt, and equity, along with a snapshot of emerging alternative forms of financing.

## KEY TERMINOLOGY

**ANGEL INVESTOR** – A high net worth individual that invests their personal funds into companies (typically equity or debt).

**CAPITAL STAGE** – The Series A, B, etc. naming convention refers to the class of shares sold in a company to signify to investors what milestones may have been achieved.

**COLLATERAL** – Something of value pledged as security for repayment of a loan, to be forfeited in the event of a default (inability to pay).

**CONVERTIBLE DEBT** – An early stage investment tool that is initially offered to the company as debt, but the investor intends to use the value of the loan to purchase shares (equity) at a later date with additional incentives.

**DEBT** – Dollars borrowed (from a lender) that are paid back in installments over time plus interest. Commercial debt is low-risk, provided at market rates, and typically requires collateral.

**EQUITY INVESTMENT** – Dollars invested in exchange for shares of ownership in a company. This is also referred to as dilutive capital.

**INTERNAL RATE OF RETURN** – The gain or loss on an investment over a specified time period, expressed as a percentage of the investment's cost.

**NON-DILUTIVE CAPITAL** – This refers to capital offered to a company that does not require the sale of shares and therefore does not dilute the founders' ownership, such as grants.

**RISK APPETITE** – The amount and type of risk that an organization or funder is willing to take in order to meet their strategic objectives. A higher risk appetite is correlated with a higher return expectation.

**STRATEGIC CORPORATE INVESTOR** – Large, established companies that make investments in startups and can add strategic value beyond cash such as sales channels, product development capability, and industry connections.

**VENTURE CAPITAL FUND** – A professionally managed pool of money designed to invest in startups for a significant return on investment.



## LEGAL STRUCTURE

Most funding available to innovators requires a recognizable legal structure to be established prior to the funding being placed. This could take the form of an institution, non-profit entity, or a for-profit entity such as a limited liability company (LLC, LTD) or a corporation (C Corp). Seeking competent legal counsel when initially establishing the venture is paramount so as to be aware of liability risks, protections available under the law, as well as the impact of legal structure on funding available. Specifically, only for-profit entities can sell shares of their company, or in other words, raise equity investment.



## FUNDER PROFILES

While every funder may have a narrow set of criteria for the specific types of ventures or causes they fund, in general, we can classify available funding into three main types: non-dilutive grants, equity which allows for shared ownership in a for-profit business, and debt which must be paid back with interest. Figure 2 outlines the differences between these funding types and will help you determine what funding is right for your organization.



## OPPORTUNITY STAGE

Funders will have preferences for the stage of technologies and companies that they will support. We separate risk into three broad categories: team, market, and technology.

Investors like to see that the principals of the team are passionate and knowledgeable about their market and customer base and have the skills to develop and launch the product. Over time, investors expect the team to grow and obtain all the skills necessary for a successful business. Similarly, the more capital raised, the higher expectations there are

on validation from the market. Product adoption is an obvious measure of this but an investor will dig into what effort is required to obtain each sale to understand what the opportunity for scale is.

Thinking of innovation as a spectrum ranging from “idea” on one side, to “fully scaled, profitable solutions” at the other end is helpful to visualize this concept. The earlier the technology is on the


spectrum, the more potential fail points exist in bringing it to market. Technology risk, the chances of a technology failing en route to market, is a major consideration for equity investors. This may be less of an issue for grantors who often have different return expectations on the funds they provide. Debt funders (lenders) are rarely willing to take on technology risk.

MILESTONES	PRE-REVENUE STAGE COMPANY			REVENUE STAGE COMPANY		
TECHNOLOGY STAGE	Idea	Prototype	Pilot	Revenue generating, Early manufacturing runs	Recurring revenue, Mass manufacturing	Profitable, new product development
MARKET STAGE	Market opportunity identified; customer discovery ongoing		Validate product market fit			Market validation and scale
TEAM STAGE	Initial founder or co-founders	First hires		Organizational structure defined; vertical growth	Executive leadership growth; values and culture solidified	
CAPITAL STAGE	Founding capital	Seed stage capital		Series A	Series B	Series C
External Funding Types <div><div>Mixed</div><div>Equity</div><div>Other</div><div>Debt</div></div>	Friends and family (personal debt or equity)					
		Angel Capital (convertible debt or equity)				
		Venture Capital (equity)				
		Strategic Corporate Investors				
					Private Equity >>	
			Revenue-based financing			
				Commercial Debt		
	Grants >>					

Source: VentureWell

FIGURE 1: This table is a visual representation of the milestones a company typically achieves as it progresses through various types of financing. The milestones are fluid but this is typically the order in which they are achieved in relation to one another. This is not representative of every company's pathway; some may only use debt, some might be able to rely on grants exclusively, while some may raise every type of capital available. The reality of the entrepreneur's experience will depend on their ability to accomplish the business, market, and team milestones with or without external funding. With technology innovation, typically more, riskier funding is required in order to complete the prototype, run the pilot, set up manufacturing processes, meaning technology companies are most likely to raise funds from equity investors.

FIGURE 2: SUMMARY OF TRADITIONAL FORMS OF FINANCING

	GRANTS	EQUITY	DEBT
<b>GOAL</b>	Capital provided to achieve specific milestones or advance the mission of the grant organization. The funding is tied to specific projects, milestones, or engagements.	Capital provided in return for a share of ownership in the company.	Capital provided for working capital in return for the repayment of principal (the amount of the loan) and interest (a rate both parties agree to) over time.
<b>FUNDERS</b>	Philanthropic Organizations, Governments, Organizations with Corporate Social Responsibility (CSR) arms	Individual Angels, Angel Investor Groups, Venture Capital Firms, Corporate Venture Capital Funds	Banks, Individual Lenders, Development Banks
<b>INVESTOR RETURN PROFILE</b>	Grant funders look for projects in line with their specific mandate or goals. The return on investment is measured in social impact and advancement of their mission.	Equity investor returns are determined by the success of the underlying company they invest in. The higher the success of the company, the higher the rate of return to the investor. Specific return expectations vary widely from investor to investor, and are dependent on many factors, but most equity investors expect their portfolio to outperform public markets.	Debt funders require interest payments on their lent capital. The interest rate reflects the solvency and risk profile of the borrower. In general, the higher the risk profile of the borrower, the higher the interest rate which will be required.
<b>OWNERSHIP DILUTION</b>	None	Equity funders take ownership in the companies they invest in. The specific percentage of ownership will vary based on the valuation of the entity.	None
<b>REPAYMENT</b>	None	Equity funders receive a return on their capital when a liquidity event (i.e., public offering or company acquisition) occurs.	Debt funders start receiving a return of their capital through installment payments of principal plus interest shortly after the debt is placed. In some cases, the actual payment may be deferred, but the accrual of interest will start immediately.
<b>ECONOMIC COST</b>	Grant funding carries a low economic cost to the organization, but does include soft costs (i.e., time and personnel costs) of management and reporting responsibilities back to the grant funding organization.	Equity funding carries a relatively high economic cost to the company who receives it. This is particularly true in cases where the business becomes successful and the equity ownership of the investor becomes highly valuable at the time of liquidity.	Debt funding carries a relatively low economic cost to the organization. Debt funding can be preferred to equity funding as the organization is able to conserve its equity and generate greater returns back to owners at time of liquidity.
<b>LEGAL</b>	Grants are structured under a contractual agreement or grant agreement between the grantor and grantee.	Equity investments are structured under a share-purchase agreement and an investors rights agreement.	Debt funding is structured through a promissory note or repayment agreement between the lender and the borrower.

Source: VentureWell



## RETURN EXPECTATIONS

Funders have different financial and economic return expectations for the funds they provide. A grant provider's return is achieved when their funds create a specific social impact or advance to a milestone. Instead of a monetary return on investment, grantors typically expect to see a return that is measured by other economic or social indicators.

Equity investors are quite different and are financially motivated, with a specific rate of return they must achieve to remain economically viable; this rate typically must be greater than other financial investment options such as putting the funds into public stocks, bonds, or savings accounts. In general, the higher the risk of the venture's failure, the higher their rate of return needs to be to justify an investment and ultimately offset

other losses they may incur in their portfolios. Typically, an equity investment portfolio of startups must return at least a 15% Internal Rate of Return or a 2.5X cash-on-cash return in order to be considered "successful." Some impact investors are willing to take slightly concessionary (below market) returns if the company is creating outsized social impact, but this varies widely and the company must still be economically viable to realize its impact. Returns are typically realized through a merger, acquisition, or initial public stock offering several years after an initial investment is made.

Lenders offer loans and expect their capital (principal) to be returned, plus an agreed upon interest rate which will fluctuate depending on the specific debt they are willing to issue. Lenders are not willing to wait for their return and expect the borrower to begin making monthly payments right away.

## ALTERNATIVE FORMS OF FINANCING

In addition to the traditionally available forms of financing outlined above, there are new forms that are becoming popular and could be useful in regions or industries where traditional capital is not readily available.

### ***Revenue-based financing***

Revenue-based financing (also called royalty-based financing) is an investment structure that is gaining popularity with angel investors and accelerators. This structure allows an investor to provide cash in exchange for promised return in form of X% of revenue every month (or quarter or year), until a certain amount (Y) is repaid. The X and Y variables can be adjusted to the investor's preferences provided the entrepreneur agrees. For example, an

investor may offer \$100,000 and will ask for 5% of revenue each year until the investor receives \$200,000 back (a 2x return). An investor could seek a higher portion of the revenue if they would like to get paid back sooner. This is a highly flexible form of financing. This is being pioneered in the social enterprise space by the Fledge Accelerator. For more information, read the book *The Next Step for Investors, Revenue-based Financing* by Luni Libes.

## ***Crowdfunding***

Crowdfunding is the concept of raising smaller amounts of money from many people, usually via an online forum. There are three main types of crowdfunding which dictate what is offered in exchange for the funding:

1. Donations, cause, or rewards based (e.g., Kickstarter, GoFundMe, Indiegogo)
2. Equity crowdfunding (e.g., AngelList, SeedInvest)
3. Debt crowdfunding (e.g., Kiva)

Donations, cause, or rewards-based crowdfunding is a way to raise awareness about your cause or company and activate an existing network's ability to contribute financially to your work in exchange for a reward, a simple thank you or recognition. In some cases, companies use rewards-based crowdfunding for consumer products to gather pre-orders in advance of a product launch. There is typically no legal obligation to honor the promise made in exchange for the contribution, however your organizational reputation is on the line with a group of early adopters and/or supporters. A fair amount of effort is required to prepare the campaign, the materials, and to accurately budget for the rewards that must be honored. For some organizations, the return on your investment of time and resources is not sufficient for the amount of capital raised. Once in a while, campaigns can spread virally, but this is the exception rather than the rule.

Equity crowdfunding is an opportunity for for-profit companies to advertise publicly, including via the internet, in order to find investors that will buy shares in their company. It is highly regulated in the United States and the United Kingdom and is not yet permitted in all countries. Please consult a qualified attorney before including equity crowdfunding in your fundraising strategy. An overview of US

regulations is available at the following link but it does not constitute legal advice: <https://venturewell.org/types-crowdfunding-regulations>.

Debt crowdfunding is a useful tool for raising capital from the public that could be returned plus interest in the near term. Those that contribute to a debt crowdfunding campaign want to support the work but also hope to see a return on their investment. Kiva is one of the most popular sites for this purpose. Some Powering Agriculture innovators, such as Village Infrastructure Angels and EarthSpark, have used Kiva to support some of their end-users in their efforts to acquire financing to purchase their products.

## ***A Note on Impact Investing***

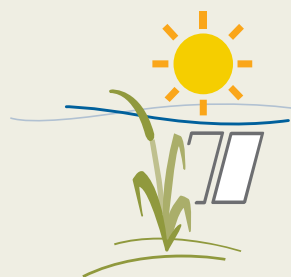
Impact investing is an exciting and relatively new trend in the investment landscape. Impact investing refers to investments made with the intention to generate a measurable social and/or environmental impact alongside the potential financial return. There is a lot of debate in the industry around whether impact investors should be “finance first” or “impact first”. Nonetheless, it's important to understand that impact investors could use any of the investment structures mentioned above for their impact investments; impact investing does not necessarily refer to a specific type of capital from a legal and financial perspective. For equity impact investors, they are simply willing to take on more risk (i.e., investing in emerging markets or in certain markets) than traditional investors and include the value of the impact in the return profile. That said, the definition of impact varies from investor to investor, so it's important for innovators to seek funders who can be partners with an aligned mission and vision.





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Further information about Powering Agriculture can be found at [PoweringAg.org](http://PoweringAg.org)

